

Appl. No. 10/047,280
Reply to Office Action of 09/30/2003

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

Claim 1 (Original): A system comprising:

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a data cartridge carrying a non-tape storage medium, wherein the data cartridge includes read/write circuitry to access the non-tape storage medium and an external electrical connector coupled to the read/write circuitry; and

a tape drive emulator having an electrical socket to receive the electrical connector of the data cartridge.

Claim 2 (Original): The system of claim 1, wherein the socket comprises a zero insertion force (ZIF) socket having a set of connectors that engage the electrical connections of the data cartridge.

Claim 3 (Currently Amended): ~~The system of claim 2;~~

A system comprising:

a data cartridge carrying a non-tape storage medium, wherein the data cartridge includes read/write circuitry to access the non-tape storage medium and an external electrical connector coupled to the read/write circuitry; and

a tape drive emulator having an electrical socket to receive the electrical connector of the data cartridge.

wherein the tape drive emulator includes a sensor to sense the insertion of the data cartridge, wherein the tape drive emulator mechanically actuates the ~~ZIF~~ electrical socket upon sensing the insertion of the electrical ~~interface~~ connector of the data cartridge.

Claim 4 (Currently Amended): ~~The system of claim 2;~~

A system comprising:

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a data cartridge carrying a non-tape storage medium, wherein the data cartridge includes an external electrical connector; and

a tape drive emulator having an electrical socket to receive the electrical connector of the data cartridge.

wherein the socket includes a mechanical actuation mechanism operable by a data cartridge library automation system to electrically couple the data cartridge to the emulation tape drive emulator.

Claim 5 (Original): The system of claim 1, wherein the tape drive emulator comprises a host interface to electrically couple the tape drive emulator to a host computing device.

Claim 6 (Original): The system of claim 5, wherein the host interface conforms to one of the Small Computer System Interface (SCSI), the Fiber Channel interface, the Network Data Management Protocol (NDMP), and the Enhanced Integrated Drive Electronics / AT Attachment (EIDE/ATA) interface.

Claim 7 (Currently Amended): The system of claim 5, wherein the tape drive emulator comprises a translation unit to translate commands between the host interface and the electrical socket~~data-cartridge interface~~.

Claim 8 (Original): The system of claim 7, wherein the translation unit receives data stream commands from the host interface and translates the data stream commands into data block commands.

Claim 9 (Original): The system of claim 8, wherein the translation unit comprises a data buffer for buffering the data stream commands.

Claim 10 (Original): The system of claim 1, wherein the non-tape storage medium comprises a disk-shaped storage medium.

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Claim 11 (Original): The system of claim 10, wherein the data cartridge includes a self-contained disk drive housing the disk-shaped storage medium and a disk driver controller.

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Claim 12 (Original): The system of claim 10, wherein data cartridge further comprises a disk drive controller to control access to the non-tape storage medium, wherein the controller communicates with the tape drive emulator according to one of the Small Computer System Interface (SCSI), the Fiber Channel interface, and the Enhanced Integrated Drive Electronics / AT Attachment (EIDE/ATA) interface.

Claim 13 (Original): The system of claim 1, wherein the socket of the tape drive emulator provides power to the controller of the data cartridge via the electrical connector of the data cartridge.

Claim 14 (Original): The system of claim 1, further comprising an automation unit to selectively retrieve the data cartridge from a plurality of data cartridges conforming to industry standard dimensions for magnetic tape data cartridges.

Claim 15 (Original): The system of claim 1, wherein the data cartridge comprises a housing conforming to industry standard dimensions for a magnetic tape drive cartridge.

Claim 16 (Original): The system of claim 1, wherein the tape drive emulator has a form factor of an industry standard tape drive such that the location of the socket conforms to the location of a slot within the industry standard tape drive.

Claim 17 (Original): The system of claim 16, wherein the tape drive emulator comprises a power connector and one or more mounting holes, and further wherein the dimensions of the tape drive emulator, the location of the power connector, and the location of the mounting holes conform to the industry standard tape drive.

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Claim 18 (Original): The system of claim 1, wherein in response to a query from a host computing device the tape drive emulator identifies itself as an industry standard tape drive.

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Claim 19 (Original): The system of claim 1, wherein the tape drive emulator determines the capacity of the non-tape storage medium within the data cartridge and communicates the capacity to a host computing device.

Claims 20-25 Cancelled.

Claim 26 (Original): A tape drive emulator comprising an electrical socket to receive an electrical connector of a data cartridge carrying a non-tape storage medium.

Claim 27 (Original): The tape drive emulator of claim 26, wherein the socket comprises a zero insertion force (ZIF) socket having a set of connectors that engage the electrical connections of the data cartridge.

Claim 28 (Currently Amended): ~~The tape drive emulator of claim 27, further comprising~~
A tape drive emulator comprising:

an electrical socket to receive an electrical connector of a data cartridge carrying a non-tape storage medium; and

a sensor to sense the insertion of the data cartridge, wherein the tape drive emulator mechanically actuates the ZIF-socket upon sensing the insertion of the electrical interface connector of the data cartridge.

Claim 29 (Currently Amended): ~~The tape drive emulator of claim 27, A tape drive emulator comprising an electrical socket to receive an electrical connector of a data cartridge carrying a non-tape storage medium, wherein the socket includes a mechanical actuation mechanism operable by a data cartridge library automation system to electrically couple the data cartridge to the emulation tape drive emulator.~~

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Claim 30 (Original): The tape drive emulator of claim 26, wherein the tape drive emulator comprises a host interface to electrically couple the tape drive emulator to a host computing device.

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Claim 31 (Currently Amended): The tape drive emulator of claim 30, wherein the tape drive emulator comprises a translation unit to translate commands between the host interface and the electrical socket data cartridge interface.

Claim 32 (Original): The tape drive emulator of claim 26, further comprising a controller to control access to the non-tape storage medium of the data cartridge.

Claim 33 (Original): The tape drive emulator of claim 26, wherein the non-tape storage medium comprises a disk-shaped storage medium and the controller within the tape drive emulator comprises a disk drive controller.

Claim 34 (Original): The tape drive emulator of claim 26, wherein the tape drive emulator has a form factor of an industry standard tape drive such that the location of the socket conforms to the location of a slot within the industry standard tape drive.

Claim 35 (Original): The tape drive emulator of claim 34, wherein the tape drive emulator comprises a power connector and one or more mounting holes, and further wherein the dimensions of the tape drive emulator, the location of the power connector, and the location of the mounting holes conform to the industry standard tape drive.

Claim 36 (Original): The tape drive emulator of claim 26, wherein in response to a query from a host computing device the tape drive emulator identifies itself as an industry standard tape drive.

Claim 37 (Original): The tape drive emulator of claim 26, wherein the tape drive emulator determines the capacity of the non-tape storage medium within the data cartridge and communicates the capacity to a host computing device.